



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Kurt Waggoner, Scott Fladgard and Lloyd Fladgard  
Application No. : 09/074,809  
Filed : May 7, 1998  
For : Unitary Modular Shake-Siding Panels, and Methods for  
Making and Using Such Siding Panels

Examiner : Kevin Wilkens  
Art Unit : 3635  
Docket No. : 319578006US  
Date : February 21, 2001

Declaration of Scott Fladgard Under 37 C.F.R. § 1.132

I, Scott Fladgard, hereby declare as follows:

1. I am one of the inventors of US Application No. 09/074,809 and the President of Pacific International Tool & Share, Ltd. (Pacific International) located in Kingston, Washington. Before joining Pacific International, I had over twenty (20) years of experience in the construction industry.
2. Pacific International was founded in 1993 to design and manufacture cutting tools for cutting fiber-cement siding materials. As set forth in US Patent Nos. 5,570,688; 5,729,386; and 5,993,303, all of which were incorporated by reference into the present application, Pacific International has developed several cutting tools that can cut cured fiber-cement siding materials without producing unsafe levels of dust.
3. The fiber-cement siding industry is over 100 years old. Fiber-cement siding was composed of asbestos and Portland

cement until the middle part of the 1900's, but asbestos was later determined to cause cancer. At the time of the present invention, asbestos based fiber-cement siding materials were not available for sale because of the known carcinogenic properties of these products. In fact, existing houses or other structures that have old asbestos based fiber-cement siding are typically devalued compared to similar structures without asbestos fiber-cement siding. Additionally, the cost to remove asbestos based fiber-cement siding from such structures is typically several thousand dollars more than removing other types of siding materials because contractors must comply with many government safety regulations to dispose of asbestos. Therefore, at the time of the invention, the teachings of the art expressly suggested that asbestos based fiber-cement siding should not be used under any circumstances.

4. The art at the time of the present invention clearly taught that slots or notches should not be cut in asbestos based siding materials. Asbestos fiber-cement siding materials are generally brittle. As such, slots and other fine details formed after curing the asbestos-cement siding would likely be cut using an abrasive disk, which would create a significant amount of airborne asbestos particles. At the time of the invention it was known that airborne asbestos particles were particularly dangerous, and thus the state of the art at that time taught that cutting slots in asbestos-cement products would be unacceptably dangerous. Thus, a person skilled in the art at the time of the present invention would clearly have the understanding that slots should not be cut into a panel to avoid producing airborne asbestos fibers.
5. The fiber-cement siding materials that are currently available, and those that were available at the time of the invention, are made from cement, sand, and cellulose fiber. At the time of the invention, it was also difficult to cut slots or other detailed features into this type of fiber-cement siding before it

had been cured into a hardened state. Uncured cellulose-based fiber-cement is relatively soft and flexible (e.g., similar to Play-Doh<sup>®</sup>). More specifically, before curing the sheets of cellulose-based fiber-cement, they are typically so soft that cutting slots could cause them to be deformed during handling. As a result, a typical manufacturing process would generally make only long cuts to separate planks or panels from one another using waterjet cutting tools before curing the fiber-cement. Therefore, at the time of the present invention, a person skilled in the art would understand that slots and other fine details should be cut in fiber-cement siding materials only after the sheets have been cured.

6. A person skilled in the art at the time of the present invention would also have understood that it was difficult to cut fiber-cement siding materials after the sheets had been hardened using a curing process. Cured cellulose-based fiber-cement siding materials were typically cut using rotary blades (e.g., abrasive disks or carbide sawblades), which also produce a significant amount of the dust. Although cellulose-based fiber-cement siding materials do not contain asbestos, and thus these materials are not carcinogenic, the dust produced by cutting cellulose-based fiber-cement siding with rotary blades generally contains fine particles of silica that have some health concerns. Evidence of this is that manufacturers of cellulose-based fiber-cement siding products currently need to monitor employees for levels of silica in accordance with regulatory guidelines. Therefore, at the time of the present invention, the art taught that fine details should not be cut into the cellulose-based fiber-cement siding materials because of the extensive dust that was produced in large-scale manufacturing processes.
7. Beginning in 1996, Pacific International recognized the need for fiber-cement shake siding. Based on new cutting tools designed by Pacific International, we believed that it could be possible to cut fine details in cured cellulose-based fiber-cement

siding for large-scale manufacturing of shakes. Pacific International, therefore, experimented with manufacturing individual shakes composed of fiber-cement by shearing across the width of cured fiber-cement planks using dustless cutting tools developed by Pacific International.

8. Pacific International initially marketed individual fiber-cement shakes to be used as decorative siding. For example, a typical application installed the Pacific International individual shakes under dormers or other architectural designs. The individual fiber cement shakes, however, were not successful because of several factors. First, they are expensive to manufacture and did not compete with conventional wood shakes on price. Second, individual shakes are also expensive to install because it takes a significant amount of labor to hang the individual shakes. Third, these shakes are also not suitable for applications that use gypsum as an exterior wallboard because the individual shakes are not wide enough to span between the studs. Therefore, Pacific International believed that individual fiber-cement shakes would not be able to compete against wood shakes.
9. I, along with the other named inventors, subsequently conceived of the cellulose-based fiber-cement shake panels formed of one material and having a plurality of slots that define shake sections in accordance with the claimed invention. We conceived that the claimed shake panels could be manufactured by cutting or stamping slots in cured fiber-cement using the dustless cutting tools that were developed at the time of the invention. Thus, even though the art at the time of the invention taught that there were significant health risks associated with cutting slots in either asbestos based or cellulose-based fiber-cement siding such that a person skilled in the art would be deterred from combining the claimed combination of elements together, we rethought conventional wisdom regarding cutting fine details in cured fiber-cement

siding. The claimed cellulose-based fiber-cement panels, therefore, were created in contravention to the generally accepted understanding of processing fiber-cement siding at the time of the invention.

10. Pacific International subsequently produced cellulose-based fiber-cement panels formed of one material and having a plurality of slots that define shake sections in accordance with the claimed invention. In the summer of 1999, James Hardie Building Products, Ltd. (JHBP), which is the largest producer of fiber-cement siding in the United States with over 100 years of experience in the fiber-cement siding industry, came to Pacific International to view an assembly of shake siding panels in accordance with the claimed invention. At the time, JHBP manufactured individual shakes of fiber-cement. John Dibsky, Manager of Marketing for JHBP at the time, stated "I guess my product [the individual shakes being manufactured by JHBP] is obsolete."
11. In the fall of 1999, Pacific International and JHBP entered into an exclusive manufacturing agreement in which Pacific International would manufacture the claimed shake panels for JHBP. During negotiations for this agreement, JHBP indicated that the claimed shake panels were a very good product that could satisfy the long-felt need for providing fiber-cement shakes, and thus JHBP stated that it would enter into an agreement only if Pacific International agreed to manufacture the claimed shake panels exclusively for JHBP.
12. In the first twelve months of the relationship with JHBP, Pacific International produced approximately 3 million square feet of shake panel in accordance with the claimed invention. In the first three months of the second-year of the relationship with JHBP, Pacific international is producing approximately 2 million square feet per month of shake panels in accordance with the invention for an annualized rate of approximately 24 million

square feet. Therefore, in the first two years of production, Pacific International will have an eight-fold increase in sales for the claimed shake panels.

13. Although the shake panels in accordance with the claimed invention have been quite successful in the marketplace, JHBP has intentionally maintained high wholesale prices of these products to limit the demand to Pacific International's production capacity. In response to a request from a customer to lower the wholesale price of the claimed fiber-cement shake panels, Stormy Clements, the Product Manager of JHBP's Heritage Series shake panels in accordance with the claimed invention, said that the prices were intentionally being maintained at a level that would limit the demand for the product to the level of the production. Therefore, the success of the claimed shake panels is not because of low pricing.
14. Additionally, JHBP and Pacific International also have not performed any extensive promotions of the claimed shake panels. Pacific International has spent less than approximately \$20,000 to promote the claimed shake panels, and I understand that JHBP has promoted the claimed shake panels using only flyers distributed at lumber yards and by their sales representatives.
15. I believe that the large demand for the claimed shake panels manufactured by Pacific International is related directly, and primarily, to the composition, structure and manufacturing techniques of the panels. First, because the panels are composed of a cellulose-based fiber-cement without asbestos, they are a safe material. Second, because the panels are composed of one material, they are less expensive to manufacture than laminated panels that have a veneer. Third, because the panels can safely have slots cut after the planks/sheets have been cured, a single panel can have the appearance of a plurality of shakes such that the claimed shake

panels are much less expensive to manufacture and install than individual shakes.

16. In summary, even though JHBP and other fiber-cement siding companies have been making fiber-cement siding products for over 100 years, and even thought US Patent No. 3,608,261 discloses an asbestos-based panel having cutouts to define shake sections, none of these products has been successful in the fiber-cement shake siding market. Yet, in contrast to the previous designs, the combination of elements of the claimed shake panels have been highly successful in only the first few years that they have been in the market in spite of being priced above competitive price points.
17. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that the making of willfully false statements and the like is punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and may jeopardize the validity of any patent issuing from this patent application.

Signed on this 22nd day of February, 2001.

Pacific International Tool & Shear, Ltd.



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Scott Fladgard  
President